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(54) Title: PREPARATION OF FUNCTIONAL POLYMERS

(57) **Abstract:** The process of the present invention is directed toward conducting highly selective, high yield post polymerization reactions on polymers to prepare functionalized polymers. An embodiment of the present invention comprises conducting click chemistry reactions on polymers. Preferably, the polymers were prepared by controlled polymerization processes. Therefore, embodiments of the present invention comprise processes for the preparation of polymers comprising conducting a click chemistry reaction on a functional group attached to a polymer, wherein the polymer has a molecular weight distribution of less than 2.0. The functional polymers may be prepared by converting an attached functional unit on the polymer thereby providing site specific functional materials, site specific functional materials comprising additional functionality, or chain extended functional materials. Embodiments of the process of the present invention include functionalization reactions, chain extensions reactions, to form mock copolymer linking reactions, and attaching side chains to form graft copolymers, for example.



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